Each of new claims 383-391 is fully supported by the specification as filed, and adds no new matter. As stated above, claim 383 corresponds to claim 162. The artificial antigen presenting cells of the claim comprise the elements of the preferred artificial antigen presenting cells claimed in co-pending, commonly owned patent application serial number 09/756,983. Claim 384 is directed to embodiments of the invention wherein the neutral phospholipids (see, e.g., specification page 20, lines 1-2) of the liposome are phosphotidylcholine (see, e.g., specification page 20, lines 1-3).

New claim 385 concerns methods of the invention that comprise the additional step of isolating T cells from T cell/aAPC complexes. This claim is supported, for example, by originally filed claim 163. New claim 386 relates to the methods of claim 385 that include the extra step of characterizing a functional phenotype of the isolated T cells, and is supported by claim 165 as originally filed.

New claim 387 concerns preferred sources for biological samples used in a method according to the invention as now claimed. These sources are whole blood, blood cells, blood plasma, and tissue, as set forth in claim 166 as originally filed.

Preferred antigens of interest are set out in new claim 388, which corresponds to claim 6 as originally filed. Claim 389 concerns methods wherein the aAPCs also contain a label, preferred examples of which are set forth in new claim 391. New claim 390 sets forth preferred examples of where the label may be bound to the aAPC. These claims are supported, for example, by original claim 5.

In view of the amendment herein, the result of which is to place only several claims all directed to the same invention before the PTO, Applicant respectfully requests initiation of substantive examination. Moreover, given the correspondence between the newly added claims and those pending in the related '983 application, Applicant respectfully submits that claims 383-391 are in condition for allowance.

Conclusion

Herein, Applicant has canceled the previously pending claims and added nine new claims, all directed to the invention of Group 1, as set forth in Paper 23. Applicant respectfully contends that these new claims are in condition for allowance, and he earnestly

solicits early issuance of a notice indicating this. If any issue exists that can be dealt with appropriately without the need for a formal action and response thereto, the Examiner telephone the undersigned at his earliest convenience so that the same may be expeditiously resolved.

Respectfully submitted,

Dated: 30 MAY 2003

By: _____

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Appendix A

New claims.

Below please find a copy of the new claims added by way of the amendment above.

383. (new) A method of identifying a T cell specific for an antigen of interest, comprising:

c) contacting a biological sample containing T cells suspected of being specific for the antigen of interest with an artificial antigen presenting cell that presents the antigen of interest in order to form a complex comprised of a T cell specific for the antigen of interest and an artificial antigen presenting cell that presents the antigen of interest, wherein the artificial antigen presenting cell comprises:

i. a liposome comprising a lipid bilayer, wherein the lipid bilayer is comprised of neutral phospholipids and cholesterol;

ii. at least one GM-1 ganglioside molecule disposed in the lipid bilayer;

iii. a cholera toxin ß subunit bound to a GM-1 ganglioside molecule;

iv. an MHC component loaded with the antigen of interest, wherein the antigen-loaded MHC component is bound to the cholera toxin ß subunit; and

v. an accessory molecule that can stabilize an interaction between a T cell receptor and the antigen-loaded MHC component; and

d) detecting the complex, if formed, thereby identifying a T cell specific for the antigen of interest.

384. (new) A method according to claim 383 wherein the neutral phospholipids are phosphotidylcholine.

385. (new) A method according to claim 383 further comprising the step of isolating from the complex the T cell specific for the antigen of interest.

386. (new) A method according to claim 385 further comprising the step of characterizing a functional phenotype of the isolated T cells.

387. (new) A method according to claim 383 wherein the biological sample is selected from the group consisting of whole blood, blood cells, blood plasma, and tissue.

388. (new) A method according to claim 383 wherein the antigen of interest is selected from the group consisting of a peptide, a peptide derived from a recipient of a graft, a cancer cell-derived peptide, a peptide derived from an allergen, a donor-derived peptide, a pathogen-derived molecule, a peptide derived by epitope mapping, a self-derived molecule, and a self-derived molecule that has sequence identity with a pathogen-derived antigen.

389. (new) A method according to claim 383 wherein artificial antigen presenting cell also comprises a label.

390. (new) A method according to claim 389 wherein the label is bound to a molecule of the artificial antigen presenting cell selected from the group consisting of a neutral phospholipid, a cholesterol molecule, a GM-1 ganglioside molecule, a cholera toxin ß subunit, an MHC component, the antigen of interest, and an accessory molecule.

391. (new) A method according to claim 389 wherein the label is selected from the group consisting of biotin, vancomycin, a fluorochrome, FITC, and a radiolabel.